

ABSTRACT OF THE DISCLOSURE

An image projection system and method is presented for
5 optically projecting an image onto a display surface with visually correct
geometry and optimum image quality. The projection system includes an
image processing unit for receiving the input image data and generating
distortion-compensated image data to compensate for ensuing spatial
distortions in the projection system, a projection light engine for receiving the
10 distortion-compensated image data and projecting a distortion-compensated
optical image that corresponds to the distortion-compensated image data;
and, an optical reflection assembly comprising at least one curved mirror
positioned in the optical path of the distortion-compensated optical image
emerging from the projection light engine for producing a displayed optical
15 image with reduced distortion on the display surface. The image processing
unit distortion-compensates the input image data such that the optical and
spatial distortions associated with the projection light engine and optical
reflection assembly are substantially reduced in the displayed optical image.